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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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AKERMAN SENTERFITT P. O. BOX 3188 WEST PALM BEACH, FL 33402-3188			EXAMINER GODDARD, BRIAN D	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/994,544	Applicant(s) FISCHER ET AL.	
	Examiner Brian Goddard	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-14 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-14 and 18-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09 September 2005 has been entered.

2. Claims 1-3, 6-14 and 18-21 are pending in this application. Claims 1, 8 and 13 are independent claims. In the Amendment filed with the RCE of 09 September 2005, claims 1, 8, 13, 18 and 19 were amended; claims 4-5 and 15-17 were cancelled; and claims 20-21 were added. This action is non-final.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 13, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,515,490 issued to Buchanan et al. (hereafter Buchanan '490) in view of U.S. Patent No. 5,649,060 issued to Ellozy et al. (hereafter Ellozy '060), and further in view of the publication, "Cooperative Use of MHEG-5 and

HyTime", by Rutledge et al., published by Proceedings of Hypertext and Hypermedia, 1997 (hereafter Rutledge '97).

Claim 1:

Regarding Claim 1, Buchanan '490 discloses an automatic temporal formatter for synchronizing multimedia data streams such as video, audio, and text (e.g. subtitles). Specifically, Buchanan '490 discloses: a computer-based method of synchronizing a realization of a media (Buchanan '490: Abstract) stream having at least one version of content and having a first representation synchronized with said realization, and at least one second representation (Buchanan '490: col. 57, Ins. 11-13), said method comprising:

- determining structure information for said first representation and said at least one second representation (Buchanan '490: col. 23, Ins. 59-65; col. 57, Ins. 20-30);
- determining structure association information between said first representation and said at least one second representation (Buchanan '490: col. 23, In. 66 to col. 24, In. 10; col. 57, Ins. 31-50);
- synchronizing said at least one second representation with said first synchronized representation and said realization using said structure association information (Buchanan '490: col. 24, Ins. 11-15; col. 57, Ins. 51-63; col. 58, Ins. 9-23); and
- aligning said at least one version of content with said first representation to produce linked relationships between a structural view of said at least one

version of content and said first representation (Buchanan '490: col. 24, Ins. 11-15; col. 57, Ins. 51-63; col. 58, Ins. 9-23 – Note: schedule commands within data structure link events from content and representations).

However, Buchanan '490 does not explicitly disclose: wherein said structure association information includes semantic structure association information; and wherein said aligning produces “a web of relations” as claimed.

Ellozy '060 discloses: wherein said structure association information includes semantic structure association information (Ellozy '060: col. 9, ln. 64 to col. 10, ln. 15 – note that this information is used to align an audio representation and a text representation strictly using word content i.e. semantic structure information, rather than temporal information; see Ellozy '060: col. 3, ln. 31 to col. 4, ln. 48).

Rutledge '97 discloses MHEG-5 and HyTime (Hypermedia/Time-based Structuring Language): producing a web of relations (Rutledge '97: Section 2, titled “Standards for Hypermedia”, second paragraph). It is noted that applicants' specification describes “producing a web of relations” as creating a HyTime document to realize the structural links (relations).

It would have been obvious to a person having ordinary skill in the art to augment the temporal alignment means of Buchanan '490 with the semantic structural alignment means of Ellozy '060, and further to apply the HyTime language of Rutledge '97 to realize the structural links (web of relations) produced by Buchanan '490 to obtain the invention as claimed.. The motivation to combine is suggested by Ellozy '060 which discloses that use of the means of Ellozy '060 expands the audio-video data that

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Buchanan '490 may operate on by providing support for audio-video data that are not time correlated (Ellozy '060: col. 1, Ins. 64-67); and Rutledge '97 which discloses: HyTime especially in cooperation with MHEG-5 provides a particularly advantageous combination for the encoding of hypermedia (and multimedia) presentations (Rutledge '97: Abstract)..

Claim 13:

Examiner notes that Claim 13 is the apparatus embodiment of Claim 1 and is rejected on the same basis.

Claims 20 and 21:

Regarding Claims 20 and 21, Buchanan '490, Ellozy '060 and Rutledge '97 in combination disclose the method of claim 1 and the storage of claim 13, as above, wherein the step of synchronizing said at least one second representation with said first synchronized representation and said realization is done using only said semantic structure association information (Ellozy '060: col. 9, In. 60 to col. 10, In. 15 – note that this information is used to align an audio representation and a text representation (summary transcript) strictly using word content i.e. semantic structure information, rather than temporal information) as claimed.

4. Claims 2-3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan '490 in view of Ellozy '060 and Rutledge '97 as applied to claims 1 and 13 above, and further in view of the publication, "Synchronization Relation Tree : A model for Temporal Synchronization in Multimedia Presentation", by Kim et al.

published as Technical Report TR92-42, by the Dept. of Computer Science, Univ. of Minnesota, 1992 (hereafter Kim '92).

Claim 2:

Regarding Claim 2, Buchanan '490, Ellozy '060 and Rutledge '97 in combination disclose all the limitations of Claim 1 (supra). Additionally, Buchanan '490, Ellozy '060 and Rutledge in combination disclose: said step of determining structure information further comprising: analyzing said structure information of said first and said at least one second representation (Buchanan '490: col. 23, Ins. 59-65; col. 57, Ins. 20-30).

Furthermore, Buchanan '490, Ellozy '060 and Rutledge '97 in combination disclose providing a stream of temporal data (Buchanan '490: col. 23, Ins. 59-65; col. 3, Ins. 40-47, note that data provided continuously over runtime reads on a stream). However, Buchanan '490, Ellozy '060 and Rutledge '97 in combination do not explicitly disclose: the stream of temporal data comprised of tree locators.

Kim '92 discloses a synchronization relation tree (Kim '92: Abstract). (Note that a data structure that contains pointers to data corresponding to the nodes rather than the data itself reads on tree locators).

It would have been obvious to a person having ordinary skill in the art to apply the synchronization relation tree of Kim '92 to the automatic formatter of Buchanan '490, Ellozy '060 and Rutledge '97 in combination. The motivation to combine is suggested by Kim '92 which discloses: the synchronization relation tree provides for both "temporal relationship consistency" and "dynamic schedule completion" and further is better suited for an object-oriented implementation (Kim '92: p.3, In. 38 to p. 4, In. 3).

Claim 3:

Regarding Claim 3, Buchanan '490, Ellozy '060, Rutledge '97 and Kim '92 in combination disclose all the limitations of Claim 2 (supra). Further note that Buchanan '490 and Kim '92 in combination disclose: aligning said determined structure information of said first representation and said at least one second representation (Buchanan '490: col. 24, Ins. 11-15; col. 57, Ins. 51-63; col. 58, Ins. 9-23) using said semantic structure association information in a form lacking temporal information (Ellozy '060: col. 3, In. 31 to col. 4, In. 48; col. 1, Ins. 64-67).

Claim 14:

Examiner notes that Claim 14 is the apparatus embodiment of Claim 2 and is rejected on the same basis.

5. Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan '490, Ellozy '060, Kim '92, and Rutledge '97 in view of U.S. Patent No. 5,731,847 issued to Tsukagoshi et al. (hereafter Tsukagoshi '847), in further view of U.S. Patent No. 5,794,197 issued to Alleva et al. (hereafter Alleva '197), and moreover in view of the publication, "Using the Strategy Design Pattern to Compose Reliable Distributed Protocols", by Garbinato et al. published by the USENIX Conference on Object-Oriented Technologies and Systems, 1997 (hereafter Garbinato '97).

Regarding Claim 6, Buchanan '490, Ellozy '060, Kim '92, and Rutledge '97 in combination disclose all the limitations of Claim 3 (supra). Further note that Buchanan '490, Ellozy '060, Kim '92, and Rutledge '97 in combination disclose: aligning media

streams (Buchanan '490: col. 24, Ins. 11-15; col. 57, Ins. 51-63; col. 58, Ins. 9-23).

However, Buchanan '490, Ellozy '060, Kim '92, and Rutledge '97 in combination do not explicitly disclose: aligning an audio stream specified by said media stream with an audio structure corresponding to said audio stream.

Tsukagoshi '847 discloses an encoder and decoder of subtitle information. Specifically, Tsukagoshi '847 discloses: aligning an audio stream specified by said media stream (Tsukagoshi '847: col. 11, Ins. 45-50). However, Tsukagoshi '847 does not explicitly disclose: aligning with an audio structure corresponding to said audio stream.

Alleva '197 discloses a specific alignment of an audio structure from an audio stream (Alleva '197: col. 13, Ins. 40-46). Note that while analysis of an audio stream under Tsukagoshi '847 is optional, the combination of Alleva '197 to Tsukagoshi '847 requires the generation and subsequent alignment of an audio structure from an audio stream. However, Alleva '197 does not explicitly disclose: aligning with an audio structure corresponding to said audio stream

Garbinato '97 discloses the well-known Strategy design pattern. Specifically, Buchanan '97 discloses that objects designed to handle distinct types of data and/or interactions are to be distinct via the Strategy design pattern (Garbinato '97: p. 1, col. 2, Ins. 14-27).

It would have been obvious to a person to apply the augment the automatic formatter of Buchanan '490, Ellozy '060, Kim '92, and Rutledge '97 in combination with the rate controller with the encoder/decoder of Tsukagoshi '847. The motivation to

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combine is suggested by Buchanan '490 which discloses: the automatic formatter of Buchanan '490, Ellozy '060, Kim '92, and Rutledge '97 operates during run-time (Buchanan '490: col. 3, Ins. 11-15) and further that application of the automatic formatter of Buchanan '490, Ellozy '060, Kim '92, and Rutledge '97 combined with Garbinato '97 provides the advantage of handling unpredictable data changes such as that of the runtime subtitle to video/audio matching of Tsukagoshi '847 (Buchanan '490: col. 3, Ins. 40-47; col. 6, Ins. 7-10).

It would have been further obvious to a person having ordinary skill in the art to modify the Buchanan '490, Ellozy '060, Kim '92, Rutledge '97, and Tsukagoshi '847 combination to Alleva '197. The motivation to combine is suggested by Alleva '197 which discloses that utilization of the invention of Alleva '197 provides a particularly advantageous means to model speech and audio, such as that of the subtitle information of Buchanan '490, Ellozy '060, Kim '92, Rutledge '97, and Tsukagoshi '847 (Alleva '197: col. 2, Ins. 49-63).

It would have been moreover obvious to a person having ordinary skill in the art to modify the Buchanan '490, Ellozy '060, Kim '92, Rutledge '97, Tsukagoshi '847, and Alleva '197 combination by separating the structuring functions of the first and second operations into distinct aligner objects as per the Strategy design pattern of Garbinato '97. The motivation to accomplish said modification is suggested by Garbinato '97 which discloses that encapsulating the aligner implementations into separate objects and invoking via a Strategy design pattern provides the advantages of providing both design time and runtime composition of aligner implementations and furthermore

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overcomes the limitations of an inheritance based implementation (Garbinato '97: p. 3, col. 2, ln. 3 to p. 4, col. 1, ln. 24).

Claim 18:

Examiner notes that Claim 18 is the apparatus embodiment of Claim 6 and is rejected on the same basis.

6. Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan '490, Ellozy '060, Rutledge '97 and Kim '92 in view of U.S. Patent No. 5,731,847 issued to Tsukagoshi et al. (hereafter Tsukagoshi '847), in further view of the publication, "Using the Strategy Design Pattern to Compose Reliable Distributed Protocols", by Garbinato et al. published by the USENIX Conference on Object-Oriented Technologies and Systems, 1997 (hereafter Garbinato '97).

Claim 7:

Regarding Claim 7, Buchanan '490, Ellozy '060, Rutledge '97 and Kim '92 in combination disclose all the limitations of Claim 3 (supra). Further note that Buchanan '490, Ellozy '060, Rutledge '97 and Kim '92 in combination disclose: aligning media streams (Buchanan '490: col. 24, lns. 11-15; col. 57, lns. 51-63; col. 58, lns. 9-23). However, Buchanan '490, Ellozy '060, Rutledge '97 and Kim '92 in combination do not explicitly disclose: aligning a text stream specified by said media stream with a text structure corresponding to said text stream.

Tsukagoshi '847 discloses an encoder and decoder of subtitle information. Specifically, Tsukagoshi '847 discloses: aligning a text stream specified by said media

stream (Tsukagoshi '847: col. 11, Ins. 28-35). However, Tsukagoshi '847 does not explicitly disclose: aligning with a text structure corresponding to said text stream.

Garbinato '97 discloses the well-known Strategy design pattern. Specifically, Buchanan '97 discloses that objects designed to handle distinct types of data and/or interactions are to be distinct via the Strategy design pattern (Garbinato '97: p. 1, col. 2, Ins. 14-27).

It would have been obvious to a person to apply the automatic formatter of Buchanan '490, Ellozy '060, Rutledge and Kim '92 for the rate controller with the encoder/decoder of Tsukagoshi '847. The motivation to combine is suggested by Buchanan '490 which discloses: the automatic formatter of Buchanan '490, Ellozy '060, Rutledge '97 and Kim '92 operates during run-time (Buchanan '490: col. 3, Ins. 11-15) and further that application of the automatic formatter of Buchanan '490, Ellozy '060, and Kim '92 with Garbinato '97 provides the advantage of handling unpredictable data changes such as that of the runtime subtitle to video/audio matching of Tsukagoshi '847 (Buchanan '490: col. 3, Ins. 40-47; col. 6, Ins. 7-10).

It would have been further obvious to a person having ordinary skill in the art to modify the Buchanan '490, Ellozy '060, Rutledge '97, Kim '92, and Tsukagoshi '847 combination by separating the structuring functions of the first and second operations into distinct aligner objects as per the Strategy design pattern of Garbinato '97. The motivation to accomplish said modification is suggested by Garbinato '97 which discloses that encapsulating the aligner implementations into separate objects and invoking via a Strategy design pattern provides the advantages of providing both design

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time and runtime composition of aligner implementations and furthermore overcomes the limitations of an inheritance based implementation (Garbinato '97: p. 3, col. 2, ln. 3 to p. 4, col. 1, ln. 24).

Claim 19:

Examiner notes that Claim 19 is the apparatus embodiment of Claim 7 and is rejected on the same basis.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan '490 in view of Ellozy '060 and Rutledge '97 as applied to claim 1 above, and further in view of Garbinato '97.

Claim 8:

Regarding Claim 8, Buchanan '490 discloses: a system for synchronizing a realization of a media stream (Buchanan '490: Abstract) having at least one version of content and having a first representation synchronized with said realization, and at least one second representation, (Buchanan '490: col. 57, lns. 11-13) said method comprising:

- a structurer configured to determine structure information for said first representation (Buchanan '490: col. 23, lns. 59-65; col. 57, lns. 20-30);
 - a structurer configured to determine structure information for said at least one second representation (Buchanan '490: col. 23, lns. 59-65; col. 57, lns. 20-30);
- and

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- a first aligner configured to align said structure information for said first representation and said at least one second representation (Buchanan '490: col. 23, ln. 66 to col. 24, ln. 10; col. 57, lns. 31-50);
- wherein said first aligner produces linked relationships between a structural view of said at least one version of content and said first representation (Buchanan '490: col. 24, lns. 11-15; col. 57, lns. 51-63; col. 58, lns. 9-23 – Note: schedule commands within data structure link events from content and representations).

However, Buchanan '490 does not explicitly disclose:

- wherein said first aligner aligns in part at least a semantic structure association information lacking temporal data forming a portion of said structure information for said first representation and said at least one second representation;
- that the structurer for the first representation and the structurer for the second representation are distinct; and wherein said aligning produces “a web of relations” as claimed.

Ellozy '060 discloses:

- wherein said first aligner aligns in part at least a semantic structure association information lacking temporal data forming a portion of said structure information for said first representation and said at least one second representation (Ellozy '060: col. 3, ln. 31 to col. 4, ln. 48; col. 1, lns. 64-67);

However, Ellozy '060 does not explicitly disclose that structurer for the first representation and the structurer for the second representation are distinct.

Garbinato '97 discloses the well-known Strategy design pattern. Specifically, Garbinato '97 discloses that objects designed to handle distinct types of data and/or interactions are to be distinct via the Strategy design pattern (Garbinato '97: p. 1, col. 2, lns. 14-27).

Rutledge '97 discloses MHEG-5 and HyTime (Hypermedia/Time-based Structuring Language): producing a web of relations (Rutledge '97: Section 2, titled "Standards for Hypermedia", second paragraph). It is noted that applicants' specification describes "producing a web of relations" as creating a HyTime document to realize the structural links (relations).

It would have been obvious to a person having ordinary skill in the art to augment the temporal alignment means of Buchanan '490 with the semantic structural alignment means of Ellozy '060, and further to apply the HyTime language of Rutledge '97 to realize the structural links (web of relations) produced by Buchanan '490. The motivation to combine is on the same basis as Claim 1 (*supra*).

It would have been further obvious to a person having ordinary skill in the art to modify Buchanan '490, Ellozy '060 and Rutledge '97 by separating the structuring functions of the first and second operations into distinct structurer objects as per the Strategy design pattern of Garbinato '97. The motivation to accomplish said modification is suggested by Garbinato '97 which discloses that encapsulating the structurer implementations into separate objects and invoking via a Strategy design pattern provides the advantages of providing both design time and runtime composition of structurer implementations and furthermore overcomes the limitations of an

inheritance based implementation (Garbinato '97: p. 3, col. 2, ln. 3 to p. 4, col. 1, ln. 24).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan '490, Ellozy '060, Rutledge '97 and Garbinato '97 in view of Tsukagoshi '847.

Claim 9:

Regarding Claim 9, Buchanan '490, Ellozy '060, Rutledge '97 and Garbinato '97 in combination disclose all the limitations of Claim 8 (supra). However, Buchanan '490, Ellozy '060, Rutledge '97 and Garbinato '97 in combination do not disclose: at least one renderer configured to render said at least one second representation, after being synchronized, in a form suitable for displaying as an overlaid subtitle.

Tsukagoshi '847 discloses an encoder and decoder of subtitle information. Specifically, Tsukagoshi '847 discloses: at least one renderer configured to render said at least one second representation, after being synchronized, in a form suitable for displaying as an overlaid subtitle (Tsukagoshi '847: col. 16, lns. 1-15). Note that Tsukagoshi '847 teaches "a rate controller which controls the rate that the compressed video is transferred to the multiplexer in synchronism with the rate that the subtitles are sent to the multiplexer" (Tsukagoshi '847: col. 11, lns. 37-43).

It would have been obvious to a person to apply the augment the automatic formatter of Buchanan '490, Ellozy '060, Rutledge '97 and Garbinato '97 for the rate controller with the encoder/decoder of Tsukagoshi '847. The motivation to combine is suggested by Buchanan '490 which discloses: the automatic formatter of Buchanan

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'490, Ellozy '060, Rutledge '97 and Garbinato '97 operates during run-time (Buchanan '490: col. 3, Ins. 11-15) and further that application of the automatic formatter of Buchanan '490, Ellozy '060, and Garbinato '97 provides the advantage of handling unpredictable data changes such as that of the runtime subtitle to video/audio matching of Tsukagoshi '847 (Buchanan '490: col. 3, Ins. 40-47; col. 6, Ins. 7-10).

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan '490, Ellozy '060, Rutledge '97, Garbinato '97, and Tsukagoshi '847 in view of Kim '92.

Claim 10:

Regarding Claim 10, Buchanan '490, Ellozy '060, Rutledge '97, Garbinato '97, and Tsukagoshi '847 in combination disclose all the limitations of Claim 9 (supra). Buchanan '490, Ellozy '060, Rutledge '97, Garbinato '97, and Tsukagoshi '847 further disclose that the realization specifies a media stream (Buchanan '490: col. 57, Ins. 11-13). However, Buchanan '490, Ellozy '060, Rutledge '97, Garbinato '97, and Tsukagoshi '847 in combination do not explicitly disclose: system further comprising: a tree aligner configured to determine a tree structure for said media stream.

Kim '92 discloses a synchronization relation tree. Specifically, Kim '92 discloses: the system further comprising: a tree aligner configured to determine a tree structure for said media stream (Kim '92: Abstract).

It would have been obvious to a person having ordinary skill in the art to apply the synchronization relation tree of Kim '92 to the Buchanan '490, Ellozy '060, Rutledge

'97, Garbinato '97, and Tsukagoshi '847 in combination. The motivation to combine is suggested by Kim '92 which discloses the synchronization relation tree provides for both "temporal relationship consistency" and "dynamic schedule completion" and further is better suited for an object-oriented implementation (Kim '92: p.3, ln. 38 to p. 4, ln. 3).

10. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan '490, Ellozy '060, Rutledge '97, Garbinato '97, Tsukagoshi '847, and Kim '92 in combination in further view of the publication, "Detection of Target Speakers in Audio Databases," by Magrin-Chagnolleau, published by ICASSP, 1999 (hereafter Magrin-Chagnolleau '99).

Claims 11-12:

Regarding Claims 11-12, Buchanan '490, Ellozy '060, Rutledge '97, Garbinato '97, Tsukagoshi '847, and Kim '92 in combination disclose all the limitations of Claim 10 (supra). However, Buchanan '490, Ellozy '060, Rutledge '97, Garbinato '97, Tsukagoshi '847, and Kim '92 in combination do not explicitly disclose:

- (Claim 11) means for detecting speech and non-speech boundaries; and
- (Claim 12) means for detecting transitions and speaker changes.

Magrin-Chagnolleau '99 disclose: means for detecting speech and non-speech boundaries and means for detecting transitions and speaker changes (Magrin-Chagnolleau '99: Abstract; Section 4 titled, "Detection Algorithm").

It would have been obvious to a person having ordinary skill in the art to apply the means of Magrin-Chagnolleau '99 to the Buchanan '490, Ellozy '060, Rutledge '97,

Garbinato '97, Tsukagoshi '847, and Kim '92 combination. The motivation to accomplish said application is suggested by Magrin-Chagnolleau '99 which discloses, the advantages of automatically detecting "useful cues to segment, classify, and organize" audio data using multiple speakers (Magrin-Chagnolleau '99: Abstract, Section 1, titled, "Introduction.").

Response to Arguments

11. Applicants' arguments filed 09 September 2005 have been fully considered but they are not persuasive.

Referring to applicants' remarks on pages 8-9 regarding the Section 103 rejections over Buchanan in view of Ellozy: Applicants argued that both Buchanan and Ellozy use temporal information to align one representation with another representation.

The examiner disagrees for the following reasons: Applicants' arguments regarding Ellozy's Timer 16, Timer Alignment module 42, and time aligner 106 (in Figures 2 and 3) are not germane to the question at hand. Specifically, these elements in Ellozy are involved in aligning Decoded Text (machine-translated text from audio/video) with the audio or video timestamps (i.e. to temporally align the decoded text with the audio/video itself – creating the "first synchronized representation" of the claims). Although the Decoded Text is one of the two versions (an actual text transcript is the other), timing/temporal information is NOT used to synchronize the two versions together. As described in col. 9, ln. 60 to col. 10, ln. 15 of Ellozy, and further shown in Fig. 5, synchronization of the two versions (the Decoded Text and the Index (transcript)

Text) is performed based SOLELY on the semantic structure information, because temporal information is either not available or is inaccurate. Time is simply shown as a reference in Fig. 5, to note that the Decoded Text is time-aligned with the actual audio/video itself.¹ However, note that the Index (transcript) Text does not directly time-match the decoded text (i.e. DT₄ is matched to T₅ and DT₈ is matched to T₇). This contradicts applicants' arguments altogether.

Thus, Ellozy (within the combination) does teach "synchronizing said at least one second representation [Index (transcript) Text] with said first synchronized representation [Decoded Text] and said realization [actual audio/video] using said semantic structure association information" (Claim 1); aligning said determined structure information of said first representation and said at least one second representation using said semantic structure association information in a form lacking temporal information (Claim 3); and wherein the step of synchronizing...is done using only said semantic structure association information (claim 20) as claimed.

Referring to applicants' remarks on pages 9-11 regarding the prior element of claim 4 (now incorporated in claims 1, 8 and 13): Applicants argued that the combination fails to teach or suggest producing a web of relations between a structural view of at least one version of content and said first representation as claimed.

The examiner disagrees for the following reasons: Both Buchanan and Ellozy create links (relations) between a structural view of the at least one version of content and said first representation. That is, they each (and the combination as a whole)

¹ It is noted that any synchronization is necessarily 'temporal' to some degree by the very definition/nature

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create a data structure having links between a structural view of the at least one version of content and said first representation (Buchanan: col. 24, Ins. 11-15; col. 57, Ins. 51-63; col. 58, Ins. 9-23 – Note: schedule commands within data structure link events from content and representations; Ellozy: See Abstract). Applicants' instant specification describes the creation of "a web of relations" between the structural view and the first representation as the realization of such a data structure in a HyTime document. Thus, the only difference between the combination of Buchanan and Ellozy and the invention of claim 1 is the creation of "a web of relations." Rutledge discloses realizations of data structure links within HyTime, among other things. Since applicants' specification describes the "web of relations" as a HyTime realization, the combination of Buchanan, Ellozy and Rutledge does teach the claimed web of relations by realizing Buchanan's/Ellozy's links in a HyTime document.

The remainder of applicants' remarks substantially repeat one or more of the arguments addressed above. Therefore, the examiner responds in kind.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goddard whose telephone number is 571-272-4020. The examiner can normally be reached on M-F, 9 AM - 5 PM.

of synchronization.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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bdg
09 December 2005


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